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INC

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/643,530 | 08/19/2003 | Douglas E. Breese | 1-23880 | 4482 |

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MACMILLAN, SOBANSKI & TODD, LLC
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TOLEDO, OH 43604

EXAMINER

COMPTON, ERIC B

ART UNIT PAPER NUMBER

3726

DATE MAILED: 07/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/643,530

Applicant(s)

BREESE, DOUGLAS E.

Examiner

Eric B. Compton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/19/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites, in part, "forming a tube having a variable first wall thickness extending along circumferential lengths of the tube, the tube including a region extending along a circumferential length of the tube and having a second wall thickness greater than the first wall thickness."

With respect to the above limitation, it not known how a tube can have "circumferential lengths." At best the tube can only have a single circumferential length.

Claims 2-7 depend from claim 1 and therefore and are also indefinite.

3. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

With respect to claim 1 and 8, the omitted structural cooperative relationships are: 1) by fitting the tube on the yoke the mass distribution properties of the driveshaft tube counterbalance or offset the overbalance of the tube yoke; and 2) the region

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having the second wall thickness extends along the entire length (longitudinal axis) of the tube.

Regarding the first issue, Applicant discloses

This invention relates to a method of producing a vehicle driveshaft assembly by forming a flat sheet of material having a greater thickness at a portion of its width and along its length than the thickness of other portions of the sheet, rolling the sheet about a longitudinal axis such that its lateral edges are mutually adjacent, then securing the lateral edges together by seam welding to form a tube. The mass distribution of the tube is not uniform about the axis because the wall thickness of certain portions of the tube is greater than the wall thickness of other portions of the tube. A tube yoke is machined and then balanced to determine the angular location of its overbalance about the longitudinal axis. The tube is secured to the tube yoke such that the angular location of the yoke's overbalance is diametrically opposite the portion of the tube having the heavier wall thickness.

Specification, page 3. "In this way, the mass distribution properties of the driveshaft tube 48 itself are used to counterbalance or offset the overbalance of the tube yoke." *Id.* at pages 7-8.

Regarding the second issue, Applicant discloses, "Region 44 is centrally located laterally and extends across a portion of the width and *along the entire length* of the sheet." *Id.* at page 6 (emphasis added). This apparently is an advantage over the prior art, which discussed providing balancing weights located at a single point along the width and length of the tube. *Id.* at page 2. See also U.S. Pat. 4,895,551 (showing weights mounted at single point along length of tube).

Claims 1 and 8 are silent with respect to above noted structural relationships between the tube and/or the yoke.

Claims 2-7 and 9-11 depend from claims 1 and 8, respectively, and therefore and are also indefinite.

4. Claims 8-11 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: "determining a location of overbalance of the yoke about the axis" and "fitting the tube on the yoke such that the region is spaced angularly about the axis from the location of overbalance" such that mass distribution properties of the driveshaft tube counterbalance or offset the overbalance of the tube yoke.

Claim 8 is silent with respect to the above noted method steps.

Claims 9-11 depend from claim 8 and therefore and are also indefinite.

Allowable Subject Matter

5. Claims 1-11 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

6. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not teach or suggest a method of forming driveshaft assembly by forming a tube having a first and second wall thicknesses across the circumferential length (or width) along the length (longitudinal axis) of the tube thereby forming a mass imbalance, in order to counterbalance an overbalance of the yoke when fitted together, in combination with the other claimed subject matter.

7. Applicant's characterization of the prior art is germane. See Specification, pages 1-2.

Prior Art References


The prior art references listed on the enclosed PTO-892, but not used in a rejection of the claims, are cited for their teachings of forming drive shafts.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B. Compton whose telephone number is (703) 305-0240. The examiner can normally be reached on M-F, 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter B. Vo can be reached on (703) 308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Eric Compton
Patent Examiner
A/U 3726